Abstract

The subject matter of the invention is an innovative method for the separation of polymer systems regarding their molecular weight, chemical structure, chain architecture, and colloidal additives. Such separations are currently accomplished by selective precipitation from solution, by a fractionated crystallization also from solution, and by means of gel chromatographic methods.

The invention pertains to a separation of polymer systems by means of permeation through polymer films - semi-crystalline, cross-linked, amorphous - with thicknesses in a nanometer scale. The restriction to thicknesses in a nanometer scale is essential for a high throughput of polymers. Of particular significance is the selectivity towards colloidal additives with a structure that is not in chain form.